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Blessing or Curse? A Taxonomy for Virtual Product Communities

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ABSTRACT

Since the beginning of research on Virtual Communities (VC) their importance for companies, manufacturers as well as vendors of goods and services, was highlighted. Several taxonomies of VCs have been developed. However, as these mostly remain on a relatively high level, we can draw only few conclusions regarding their effects on companies. Nevertheless VCs that are focused on products are likely to have an impact on consumers' attitudes towards products and companies. We present a taxonomy for VCs that give room for consumers to exchange product information. A website analysis with these Virtual Product Communities (VPC) in the consumer electronics industry was conducted in order to deliver proof of concept. This taxonomy is a starting point for companies and researchers alike to understand the manifold ways how consumers gain information related to products by participating in VPCs.

Keywords

Virtual Communities, Taxonomy, Product Policy

INTRODUCTION

The advantages of Virtual Communities (VC) for companies (producers as well as vendors) were highlighted ever since they were subject to research (e.g. Hagel and Armstrong 1997). VCs increasingly adopt the role of intermediaries between marketers and consumers (Kannan and Chang and Whinston 2000). Therefore, marketers who are able to understand VCs will benefit from positioning their companies according to the way how consumers want to buy products and services (Hagel and Armstrong 1997; Kozinets 1999).

Henning-Thurau and Gwinner and Walsh and Gremler (2004) have estimated that nine to ten million comments from consumers about products and companies are available on web-based consumer opinion platforms like epinions.com, consumerreview.com or rateitall.com. By reporting their positive and negative experiences, online-customers create a form of electronic word of mouth. Previous research has shown that offline word of mouth significantly influences consumers' product evaluations and purchase decisions (e.g. Mahajan and Muller and Bass 1990). It is perceived more powerful than printed information, because it is considered to be more credible (Borgida and Nisbett, 1977; Grewal and Cline and Davies 2003). As a consequence, companies should be careful to keep up to date with the latest developments that take place in certain interest groups.

Several taxonomies of VCs have already been introduced. Hagel and Armstrong (1997) have classified VCs according to the basic need that they fulfill. These are: transaction, interest, fantasy, and relationship. Schubert (2000) extends this classification with hobby, business, and research communities as well as communities of commerce, and electronic malls. Kozinets (1999, 2005) who primarily focuses on "virtual communities of consumption", categorizes VCs into five categories mostly according to the core functionality that is offered by the VC. He distinguishes rooms, boards, dungeons, lists, and rings of inter-linked web-pages.

A large extent of publications on VCs focuses on (a) members' motives to use VCs (e.g. Koh and Kim 2003, Ridings and Gefen 2004) and (b) the technical functionalities that are offered (e.g. Kozinets 1999). A great number of presented classifications were created from these two perspectives. However, it should not be overlooked that a high number of existing

VCs are actually centered around consumption and marketing interests (Kozinets 1999). Kozinets (1999) highlights this aspect by defining “virtual communities of consumption” as “affiliate groups whose online interactions are based upon shared enthusiasm for and knowledge of, a specific consumption activity or group of activities”. With *virtual product communities (VPC)* we extend this notion to all kinds of virtual communities which give room for product statements by consumers in any form. The purpose of a taxonomy of VPCs is therefore not to *replace* existing taxonomies. Moreover it represents the attempt to address the classification of VCs from a different angle that is the identification of places that enable product discussions.

The reason for this *modus operandi* can be explained by the objective of our research, that is finding VCs which are likely to have a considerable impact on companies in terms of changing consumers’ attitude towards the company and its products. We assume that on the long run this will also lead to changes in consumers’ purchase behavior. Only if companies can develop an understanding of the different shapes and contexts of the VPCs where their products are discussed, they will be able to develop a sense whether VPCs are actually a curse or a blessing to them.

The following section will give a detailed overview of our proposed taxonomy of VPCs. The subsequent section will demonstrate the results of a website analysis of existing VPCs in the consumer electronics industry that was conducted in order to deliver proof of concept. The paper closes with a brief discussion of the limitations and the conclusion.

TAXONOMY OF VIRTUAL PRODUCT COMMUNITIES

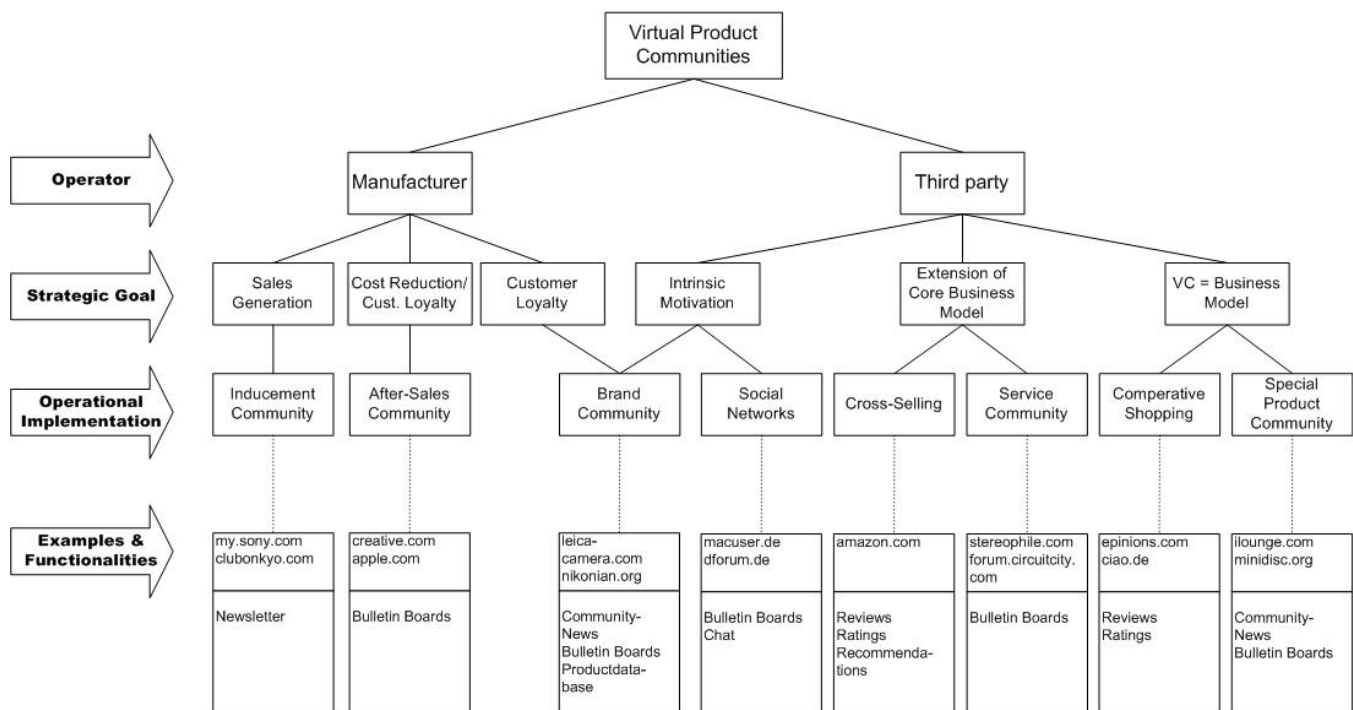


Figure 1. Taxonomy of Virtual Product Communities

Figure 1 shows the proposed taxonomy for VPCs based on an explorative web-analysis among 143 German- and English-speaking VCs that contain information about products. The different levels were defined based on our observations. We have classified VPCs into three hierarchical levels, namely *operator*, *strategic goal*, and *operational implementation*. For illustration purposes we have included typical examples and functionalities below every category.

Operator

The highest level describes the party that provides and maintains the VPC. We distinguish two types of operators: The *manufacturer* itself or a *third party*. The latter can be independent private persons, online retailers, price-comparison

websites, or non-governmental organizations. The reasoning behind this differentiation is that these two groups pursue two, partly diametric, goals. While manufacturers' interests are focused on their own products, third parties rather try to focus on consumers' bonds to their VPCs. At the same time, their representation of product information seems to be less "biased" towards certain brands. If, however, there are ties between third party operators and manufacturers – e.g. in the form of supply chain or advertising relationships – this neutrality may erode.

Strategic Goal

The second level describes the operators' strategic goals. Among manufacturer-driven VPCs we can identify three different strategic goals: *Creating customer loyalty* is probably the most important reason for manufacturers to provide a VPC. This means that they try to create a bond between the product brand and the (potential) customers. This ultimately leads to (re-) purchase of products. *Sales generation* is the second strategic goal that is achieved for example by giving consumers information about the products combined with special offers. As a result, the customer will experience a reduction of purchase risk combined with lower prices for the products. A third goal is *cost reduction*, especially when it comes to after-sales services like product support and service. If at least some of these tasks can be transferred to a VC, companies have to employ fewer resources themselves.

The strategic goals of third parties are more diverse. Due to low barriers for starting VCs, many third party VPCs do not follow economic interests but are mostly driven by *intrinsic motives*, such as fun, personal and social interest. Another possible goal is the *extension of the core business model of the operator*. A typical example would be an online retailer that provides room for its customers to make comments on products. Generally speaking, the VPC leads to an increase of quality and/or service of the website and may be a fundamental competitive advantage. The last category of third party strategic goals is the VPC as business model. Here, VPCs are primarily operated in order to realize profits, mostly through advertisement and/or market research activities.

Operational Implementation

The operational implementation shows the lowest level of the taxonomy. This level represents the derivation of concrete forms of VPCs from the strategic goals. This layer describes the primary purpose of the VPC from the operator's point of view. In the following, all eight types are described.

Inducement Community

This manufacturer-driven VPC fulfills the purpose of attracting potential as well as existing customers and turning their interest in the company and its products into future sales. VPCs of this category have to offer strong incentives in order to convert potential or existing customers to community-members: Raffles/sweepstakes, downloads, bonus-systems, price reductions, and special offers are typical examples for motivating customers to participate.

The success of this type of VPC largely depends on providing clear benefits. Accessories exclusively available for community members are one example that can help to increase the subjective benefit for customers. Furthermore, functionalities that create loyalty to the manufacturer like product registration or wish lists can help to achieve this goal. For manufacturers these VPCs can be a valuable source of user-behavior data. This data can serve to personalize the content of the community and it also enables the manufacturer to provide customized offerings, marketing-campaigns, and cross-selling activities.

One example of this type of VPC is "my.sony.com". Registered members are offered functionalities like registering their DVD-collection in an online database or creating a wish list. They can also participate in auctions and raffles. Through every action (adding an item to the wish list, receiving a newsletter, etc.) participants gain bonus points which can be redeemed for prize reductions in the integrated online shop.

After-Sales Community

After-sales communities are the second type of manufacturer-driven communities. Their focus lies in answering questions or solving problems in the context of certain products or product groups. Typical examples are bulletin boards or Usenet groups. Ideally, the company does not have to get involved as support is provided by members for members. For example, Microsoft has introduced so-called "most valuable professionals" (MVP). These dedicated and high knowledgeable newsgroup-members offer their help with specific problems for free. In return, they benefit from their reputation as MVPs.

The advantages of after-sales communities for the manufacturers are evident: They reduce costs in the after-sales support by "outsourcing" it into their community. At the same time, these VPCs enable them to keep track of regular problems with their

products and help to create adequate support offerings. Customers benefit because after-sales communities offer fast, easy-accessible, free, and mostly personalized help by (more) experienced members.

One critical issue that is raised in the context of after-sales communities is the potentially high number of passive users. So-called “lurkers” only take advantage of the VPC but do not give anything in return. For example, Preece and Nonnecke and Andrews (2004) have shown that lurkers make 82% of software support community users. Therefore a system providing incentives and appraisal for dedicated, active members is a prerequisite for establishing successful knowledge transfer among the members. Many service and support communities have rankings of their members according to their number of posts in order to meet this goal. Highly ranked members often get additional rights and benefits, become moderators or are granted a special status.

Brand Community

Virtual Product Communities can be used to increase customers’ loyalty to manufacturer or product brands. This group of VPCs has drawn considerable attention by marketing research (e.g. Fournier and Sele and Schoegel 2005; McAlexander and Schouten 2002; Muniz and O’Guinn 2001). Our definition complies with the marketing understanding of „a specialized, non-geographically bound community, based on a structured set of social relations among admirers of a brand“ (Muniz and O’Guinn 2001). In addition, we highlight that customer retention is the benefit sought when *companies* offer these VPCs themselves. Brand communities cannot only be created and operated by the brand-owner itself. In many cases, brand-enthusiasts long for other people who share and understand their passion. Their primary goal of such privately created brand communities is not to create customer loyalty, but they pursue more intrinsic goals like sharing a passion.

The nature of interaction in these communities is rather informal as its main emphasis is on social aspects like fun and common interest. Motives for consumers to participate in such brand communities are product involvement and the enjoyment to share their passion with other enthusiasts. Through their common platform, community-members can gain enormous power that can even be turned against unpopular company policies or start dynamics which can have a destructive effect on the company and its brands.

Despite the risks, brand communities can have a large positive potential for companies. They can lead to an increase of customer loyalty and positive word of mouth. Furthermore, they provide easy access to the specific target group, with the possibility of conducting market research and even the integration of customers into new product development (Kozinets 1999; Weiber and Meyer 2005).

Social Network

In case of third parties as operators, the most common motive for running a community seems to be of intrinsic nature. Reasons for operating such communities are fun and entertainment through the interaction with other people who share the same interests. Beyond that, they also represent an opportunity to gain new knowledge and insights in respect to the topic of interest.

We assume that social networks exist in a high number and variety, because they are relatively easy to build at the beginning, but still highly scalable and powerful. At the same time, the chance for earnings is low as the possibilities to make money out of banner advertisements, affiliate programs, shops, or donations are limited. Taking this into consideration we can suppose that the operators do not try to follow financial goals.

The typical key functionality of social networks is a bulletin board. The majority of social networks entirely consists of bulletin boards that give room for their members’ ample discussions (e.g. www.minidisc.org or www.dforum.de). This approach is inexpensive and relatively easy to implement, so that they can be operated without much technical knowledge and limited resources. At the same time they fulfill their purpose as platform for the exchange of information, experiences, and thoughts.

Cross-Selling Community

Third party VPCs can serve as extension of the core business model of a company. These cross-selling communities can deliver new and different experiences to the users of a website – e.g. of an online shop – and give customers additional benefit, such as product recommendations.

A well known example for a VPC, which extends a core business model, is implemented by Amazon.com. Firstly, customers have the possibility to write and read product reviews. Secondly, their transaction data is collected and used to give other users recommendations for products. Beyond that, users can create their own profiles including their personal interests and

can add other users to their “Amazon friends” list. The operator’s motivation for offering such a VPC is clearly the increase of revenues. This is achieved on the one hand through cross-selling that is supported by the recommender system. On the other hand the recommender system may lead to customer loyalty. Loyalty is also fostered by the broad range of product reviews.

Customers who write product reviews do not have any direct advantage from doing so. The main incentive seems to be gaining a good reputation within the large community of users. This is supported by a rating feature that allows users to evaluate how helpful they have perceived other users’ reviews. In addition, Amazon has created so-called “badges” that get attached to the username if the person gets good ratings for his/her reviews (e.g. Top-10-reviewer). From the perspective of the users who merely take advantage of the VPC functionalities offered by Amazon, we can say that product reviews are an valuable source of product information that may lead to a considerable reduction of the perceived purchase risk. Furthermore, the recommender system that is based on customers’ transaction data can help (potential) customers to be faster in finding products that match their preferences.

Service Community

A service community is, like a cross-selling community, an extension of the operator’s core business model. The main difference is the relation of the VPC to the business model. While for cross-selling communities the VPC represents a unique selling proposition, for the service community provider the VPC is rather an additional feature. Service communities are a means to keep up with the market and to create loyalty to their website, but the core business model of the provider would not change if there was no VPC.

Typical examples of this kind of community are online versions of magazines, like e.g. Stereophile (www.stereophile.com). Generally, this VPC does not interfere with the supply of the core services, which is high quality content. However, the VPC provides a meeting point and a communication channel to the readers of this magazine. Characteristic functionalities are bulletin boards for product reviews and the exchange of experiences with different products.

Comparative Shopping Community

The last two categories are characterized by the fact that the VPCs are actually the business model of the operator. This applies especially to the fact that generating revenues is an explicit objective of these VPCs. The role of VPCs as e-commerce business models has been highlighted by several researchers (e.g. Afuah and Tucci 2001; Leimeister and Krcmar 2004; Timmers 1998.).

Comparative shopping communities focus on shopping information for a very broad range of products and services. The information that can be found in these VPCs is mainly contributed by its members. It typically consists of product reviews and ratings. Therefore their key functionality is a comprehensive review and rating system. Incentives for writing reviews provided by the operators vary. For example, popular comparative shopping communities like Ciao! (e.g. www.ciao.co.uk) and Epinions (www.epinions.com) offer a financial compensation for writing a review, while other operators grant bonus points or other benefits. Taking this into consideration, the members’ motives to actively participate in such communities must be a mix of intrinsic and other interests. Typical sources of income for the operators are advertisements and market research.

Special Product Community

The second category of VCs as business models are *special product communities*. They differ from comparison shopping communities mostly in their focus. They are specialized on one specific product (e.g. PlayStation, iPod) or product category (e.g. digital cameras) while comparative shopping communities cover a broad range of products and shopping interests. In addition, special product communities are less focused on product reviews, but usually offer a broader range of interaction, e.g. through tutorials, bulletin boards, and downloads.

Some special product communities may be very close to brand communities, but we can make a very clear distinction between the strategic goals that are pursued by these two categories. Brand communities usually do not generate profits, either because the manufacturer is mainly interested in creating loyalty to their brand or because the third party provider is a (or a group of) brand enthusiast(s) that runs the VPC out of intrinsic motives, whereas special product communities aim at making returns. Their close relationship to relevant consumers makes these VPCs an interesting target for companies. It is therefore not surprising that their returns largely derive from advertising and affiliate programs.

WEBSITE ANALYSIS

In order to deliver proof of concept, we have tested the taxonomy with a website analysis. This analysis was conducted with VPCs that focus on consumer electronic products (e.g. cameras, TVs, audio equipment, game consoles). The idea to concentrate on one industry was inspired by classical management literature (e.g. Porter, 1980). As we are trying to capture elements that are particularly relevant for companies, we came to the conclusion that mixing different industries would lead to incomparable results. The consumer electronics industry is a suitable example industry, because its products are a very popular topic within VPCs.

Methodology

To find VPCs that cover consumer electronic products, we have typed the different product categories or the most popular brand names in combination with the words “community”, “forum”, and “my” into the search engine Google.com. The first 100 search results were closely examined and all English- or German-speaking communities were added to a list of 209 VPCs. From this list 99 communities were chosen randomly for the analysis. From the total of 99 VPCs 86.87% are English-speaking, 8.08% are German-speaking and the remaining 5.05% are multilingual. Considering the highest level of the taxonomy 76.8% of the VPCs are operated by third parties while 23.2% are manufacturer-driven communities.

Results and Discussion

The examination of the operational level has revealed that the biggest group of VPCs is social networks with 34.3%. The second biggest group with 17.2% is formed by special product communities, followed by service communities with 16.2% and after-sales and brand communities, each with 9.1%. Comparative shopping communities are represented by 8.1%, while 5.1% can be identified as inducement communities (see Table 1). Only one example for a cross-selling community, namely Amazon.com, could be identified. All analyzed VPCs could be assigned to one category according to the criteria described above. However, in some cases we had to contact the operators to clarify which strategic goals are actually followed by their VPC.

From the results, we can see that third party VPCs clearly outnumber manufacturer consumer electronics VPCs. Companies can see this on one hand as a warning sign in the sense that there is a lot of uncontrollable word of mouth about their products. On the other hand this may be a sign of processes that are pretty much in favor of the company: The high number of social networks and special product communities may be an indicator that consumers can get very involved with consumer electronics.

Operational Level	Absolute	Relative
Social Networks	34	34.3%
Special Product Community	17	17.2%
Service Community	16	16.2%
After-Sales Community	9	9.1%
Brand Community	9	9.1%
Comparative Shopping Community	8	8.1%
Inducement Community	5	5.1%
Cross-Selling Community	1	1.01%
Total	99	100%

Table 1. Operational Implementation of VPCs

Not surprisingly, the majority of the analyzed VPCs provides ample functionalities that enable their users to interact with each other (e.g. chats, personal messaging, member sites, wikis and galleries). Bulletin boards are in most cases the central enabler to consumers' interaction. For brand communities and partly social networks the interaction goes even so far that members meet in real life. This can be explained by the fact that these VPCs are a place where people with the same passions meet.

The other extreme in this context is also interesting: Neither the cross-selling nor the inducement communities did offer functionalities that enabled their members to interact with each other directly. This may reflect operators' diverging attitudes towards the VPC: While for most operators, direct interaction takes over the pivotal role in the VPC, the latter two groups seem to pursue primarily a one-directional communication goal in order to convince consumers to buy their products. This is also underlined by the communication functions they actually use, which primarily are newsletters that are sometimes blended with consumers' reviews and/or comments.

In respect of financial aspects of VPCs, a clear distinction between manufacturer-driven and intrinsic/social as well as business orientated VPCs can be made. While it is obvious that the first group avoids paid advertisements and affiliates in their communities this does not apply for the second group. Social networks and more intensively VPCs which regard their virtual community as their business model try to cover costs through online advertisement and affiliates, but also obtain income through donations and (small and symbolic) membership fees (see appendix, Table 2 for the complete results).

CONCLUSION AND LIMITATIONS

The primary goal of this paper was to propose a taxonomy of virtual product communities. This taxonomy shows that there are basically two categories of providers of VPCs, but a far larger number of interests that are followed by the providers. It provides a starting point for practitioners as well as researchers to assess the virtual communities that are relevant in their specific context and therewith to identify the chances and threats in connection with VPCs.

The secondary goal was the confirmation of the taxonomy in one industry using a website analysis. It was possible to assign all analyzed VPCs to one category. However, assessing the level of strategic goals – based on a website analysis – turned out to be problematic. We had to derive from the VPCs appearance what are the operators' underlying interests. In order to deal with this problem, we contacted several providers and asked them to confirm our assumptions. But still we recognize the possible subjectivity to this data and plan as a next step to confirm this level of the taxonomy on the basis of interviews with VPC operators. The clear definition of this level will enable us at the same time to understand what makes a VPC "successful" and can lead to more in depth research on the factors that have an impact on this.

Also the focus on one industry represents a restraint: We expect to find the same VPC categories also in other industries, but at the same time we expect every industry to have its own VPC pattern with several categories that are represented much stronger/weaker than others.

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APPENDIX

Type of Community/ Functionality	Induce- ment Comm.	After- Sales Comm.	Brand Comm.	Social Network	Cross- Selling Comm.	Service Comm.	Compara- tive Shopping	Special Product Comm.
News	25.0%	77.8%	100%	76.5%	0.0%	37.5%	62.5%	94.1%
Newsletter	100%	11.1%	66.7%	15.2%	100%	25%	75%	35.3%
Chats	0.0%	11.1%	33.3%	17.6%	0.0%	6.3%	12.5%	5.9%
Personal Messaging	0.0%	77.8%	100%	82.4%	0.0%	87.5%	75%	94.1%
Personal member sites	0.0%	0.0%	11.1%	2.9%	0.0%	6.3%	12.5%	11.8%
Wikis	0.0%	22.2%	0.0%	2.9%	0.0%	0.0%	0.0%	5.9%
Galleries	0.0%	22.2%	22.2%	47.1%	0.0%	31.3%	25%	64.7%
Comments	0.0%	22.2%	0.0%	23.5%	100%	18.8%	75%	41.2%
Reviews (by members)	25%	22.2%	22.2%	35.3%	100%	0.0%	75%	35.3%
Articles (by members)	0.0%	33.3%	22.2%	32.4%	0.0%	0.0%	75%	35.3%
Events	0.0%	11.1%	66.7%	17.6%	0.0%	6.3%	0.0%	0.0%
Classifieds	0.0%	11.1%	33.3%	35.3%	0.0%	18.8%	12.5%	23.5%
Bulletin Board	0.0%	88.9%	100%	91.2%	0.0%	100%	87.5%	100%
Download	25%	66.7%	100%	35.3%	0.0%	18.8 %	12.5%	35.3%
Rankings	0.0%	77.8%	66.7%	66.7%	100%	60%	37.5%	76.5%
Advertisement	0.0%	11.1%	22.2%	70.6%	0.0%	62.5%	87.5%	100%
Affiliates	0.0%	0.0%	11.1%	35.3%	0.0%	25%	100%	70.6%
Product-Database	0,0%	0,0%	55,6%	14,7%	0,0%	0,0%	0,0%	29,4%
Other Revenues (Donations, Fees)	0,0%	11.1%	33.3%	29.4%	100%	12.5%	12.5%	29.4%
Recommender Systems	0,0%	0,0%	0,0%	0,0%	100%	0,0%	12,5%	11,8%

Table 2. Frequencies of Analyzed Functionalities